

REMARKS

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow. Applicants respectfully request that the foregoing amendments be entered at least because they place the application in condition for allowance.

In the specification, paragraphs have been amended on pages 9-11 to correct translation errors. These amendments are supported at least based on page 1, lines 4-8.

Claims 1, 3, 6 and 8 are currently being amended.

Claims 10-12 are being added.

This amendment adds and changes claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, with an appropriate defined status identifier.

Claims 1-8 and 10-12 are now pending.

Priority documents

Applicants note that certified copies of priority documents were filed in the present application on December 23, 2003 and not as indicated in box 12)a)3 of the Office Action Summary in the Office Action. Applicants respectfully request that the Examiner acknowledge that certified copies of priority documents were received by the U.S. Patent Office in the next communication.

Rejections under 35 U.S.C. § 112, first paragraph

Claims 1-8 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Specifically, the Office Action stated on page 2, “the specification lacks any discussion of pressure loss or lack thereof in the context of two flows.” Claim 1 has been amended to delete the language “without increasing the pressure loss of each refrigerant”, thus obviating the rejection under 35 U.S.C. § 112, first paragraph.

Rejections under 35 U.S.C. § 102

Claims 1, 5, and 7 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,032,699 to Cochran et al. (“Cochran”). Claims 1-8 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,005,613 to Stanley (“Stanley”). Claims 1-8 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,285,744 to Grantham et al. (“Grantham”). Applicants respectfully traverse these rejections for at least the following reasons.

Claim 1, as amended, recites “an inner sleeve-like conduit coupling retained fixedly by a distal end of the inner hose; and an outer sleeve-like conduit coupling retained fixedly by a distal end of the outer hose.” Moreover, the structure of the inner and outer conduit coupling in claim 1 enables the alignment and connection of the inner hose to the outer hose. In this regard, claim 1, as amended, recites “wherein the inner conduit coupling and the outer conduit coupling are configured so that pressing an outer circumferential periphery of the outer conduit coupling after inserting the inner conduit coupling into the outer conduit coupling allows the inner conduit coupling to be fixedly retained with the outer conduit coupling.” While the references cited in the rejection may disclose some structure for the connection of an inner hose to an outer hose, the references fail to disclose or suggest at least this feature of claim 1.

Stanley discloses a flexible hose configured in the form of a double-layer structure which has a pair of spiders (inner conduit coupling) 44a, 44b to hold an inner hose 26 and an outer hose 12 in a concentric relationship. Each of the spiders 44a, 44b has a V-shaped portion and two diametrically opposed leg portions extending from spread ends of the V - shaped portion (col. 3, lines 13-19). The spread end is disposed about an inner portion 38 between a ridge 42 and a ferrule portion 36 of an inner coupling 32 connected to the inner hose 26. The leg portion is received in recess 46 on the internal periphery of an outer coupling stem (outer conduit coupling) 16 connected to the outer hose 12 (See col. 8 lines 8-19 and FIGs. 1 and 2).

The structure of the Stanley assembly, however, is not such that the outer circumferential periphery of the outer coupling stem 16 may be pressed in order to fixedly retain the spiders 44a, 44b. Therefore, the inner conduit coupling of Stanley is not firmly retained with the outer conduit coupling in this manner. Thus, Stanley does not disclose

“wherein the inner conduit coupling and the outer conduit coupling are configured so that pressing an outer circumferential periphery of the outer conduit coupling after inserting the inner conduit coupling into the outer conduit coupling allows the inner conduit coupling to be fixedly retained with the outer conduit coupling” as recited in claim 1.

Grantham discloses a flexible hose configured in the form of a double-layer structure which has a U-shaped yoke member (inner conduit coupling) 115 (col. 4, lines 61-62) allowing concentric alignment of an inner hose to an outer hose (See col. 4, lines 59-61). The yoke member 115 has a cross pin 116 and a tab portion 118. The cross pin 116 extends between parallel legs of the yoke member 115 and through an aligned hole within an inner coupling member 112 connected to the inner hose 12. The tab portion 118 projects outwardly from a head of the yoke member 115 and is received into a mating cavity defined between parallel ribs 122 of an outer coupling member (outer conduit coupling) 22 connected to the outer hose 16 (See col. 4, line 59 to col. 5, line 8 and FIGs. 5-7).

The structure of the Grantham assembly, however, is not such that the outer circumferential periphery of the outer coupling member 22 may be pressed in order to fixedly retain the yoke member 115. Therefore, the inner conduit coupling of Grantham is not firmly retained with the outer conduit coupling in this manner. Thus, Grantham does not disclose “wherein the inner conduit coupling and the outer conduit coupling are configured so that pressing an outer circumferential periphery of the outer conduit coupling after inserting the inner conduit coupling into the outer conduit coupling allows the inner conduit coupling to be fixedly retained with the outer conduit coupling” as recited in claim 1.

Further, the structures of Stanley and Grantham fail to suggest the advantages of the structure of claim 1 in preventing misalignment of the inner and outer hose. The feature in claim 1 of “the inner conduit coupling and the outer conduit coupling are configured so that pressing an outer circumferential periphery of the outer conduit coupling after inserting the inner conduit coupling into the outer conduit coupling allows the inner conduit coupling to be fixedly retained with the outer conduit coupling” allows the inner conduit coupling to be firmly retained with the outer conduit coupling. The Stanley and Grantham assemblies, failing to suggest the features of claim 1, are subject to misalignment of the inner and outer hose.

Cochran also fails to disclose “the inner conduit coupling and the outer conduit coupling are configured so that pressing an outer circumferential periphery of the outer conduit coupling after inserting the inner conduit coupling into the outer conduit coupling allows the inner conduit coupling to be fixedly retained with the outer conduit coupling” and thus fails to cure the deficiencies of Stanley and Grantham.

Dependent claims 2-8 and 10-12 ultimately depend from claim 1, and are patentable for at least the same reasons, as well as for further patentable features recited therein.

Applicants believe that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

Date

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